

CLAIMS:

1. A method of generating a protein array, which comprises cloning and expressing one or more proteins as full length proteins which are each tagged at either the N- or C-terminus with a marker moiety.
2. A method as claimed in claim 1 wherein the tag is a peptide sequence, eg a hexa-histidine tag, a complete protein or protein domain, eg the maltose binding protein domain.
3. A method as claimed in claim 1 or claim 2 wherein the tag allows for purification of the individual proteins in the array.
4. A method as claimed in any one of claims 1 to 3 wherein the tag is inserted such that the start or stop codon for each of the proteins is replaced.
5. An array prepared by a method as defined in any one of claims 1 to 4.
6. An array as claimed in claim 5 wherein the components of the array are immobilised, eg to a solid surface.
7. An array as claimed in claim 6 wherein the individual proteins are immobilised by means of the tag moiety.
8. A method of screening one or more compounds for biological activity which comprises the step of bringing said one or more compounds into contact with a protein array as defined in any one of claims 5 to 7 and measuring binding of the one or more compounds to the proteins in the array.

9. A method of screening one or more proteins for specific protein-protein interactions which comprises the step of bringing said one or more proteins, eg a cell surface receptor, into contact with an array as defined in any one of claims 5 to 7, and measuring binding of the one or more specific proteins with the proteins of the array.

10. A method of screening one or more proteins for specific protein-nucleic acid interactions which comprises the step of bringing said one or more nucleic acid probes into contact with an array as defined in any one of claims 5 to 7, and measuring binding and measuring binding of the probes to the proteins in the array.

11. The use of an array as defined in any one of claims 5 to 7 in the rapid screening of a compound, protein or nucleic acid.

12. The use of an array as defined in any one of claims 5 to 7 in screening for molecules which recognise each protein in the array, wherein the molecules are preferably antibodies.

13. A method of generating an antibody array which comprises bringing a protein array, as defined in any one of claims 5 to 7, into contact with an antibody library, such that one or more proteins in the protein array bind to at least one antibody in the antibody library, removing any unbound antibodies and immobilisation of those antibodies bound to proteins in the protein array.

14. A method for the screening of protein function or abundance which comprises the step of bringing an antibody array as defined in claim 13 into contact with a mixture of one or more proteins.

15. A method as claimed in any one of claims 8 to 10 and 13 which also comprises the step of first providing the protein array using a method as defined in any one of claims 1 to 4.

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